

Amendments to the Claims:

1-20. (canceled)

21. (currently amended) A successive sheet material ~~cut sheet~~ ~~(100)~~ having ~~an~~ a plurality of IC-tag tape (30) along its entire length, the ~~cut sheet being~~ successive sheet material formed by the steps of:

preparing a tape reel (1) of an IC-tag tape to which IC tags (20) are attached with such an IC-tag-pitch that each cut sheet includes at least one IC tag₇₁

unwinding said IC-tag tape from said tape reel that is held by a reel stand and driving apparatus;

providing said IC-tag tape in the machine direction to attach said IC-tag tape ~~to a~~ into said successive sheet material ~~7~~ continuously unwinding IC-tag tape substrate at a substantially equivalent speed to the running speed of said successive sheet material and attaching said IC-tag tape to said successive sheet material in an undetermined machine direction position with regard to the cutting edge of said successive sheet material in attaching IC-tag tape located in any machine direction to said successive sheet material; and

calculating by a production control device whether IC-tags are positioned in an area of the cut sheet to be trimmed in the next die-cutting process, using trim data of the box blank to be

formed into boxes, and using encoder signals at the stream of a cutter indicating the length of said successive sheet material and detecting means signals indicating location of the IC-tags on the tape attached to said successive sheet material;

wherein said successive sheet material is formed in a plurality of layers,

wherein an interface between said tape substrate and layer material forms less than 5mm dry streak,

wherein said dry streak has a width of said tape substrate that does not reduce the compressive strength of the cut sheets and boxes.

~~cutting said successive sheet material into said cut sheets with a predetermined length in the machine direction,~~

~~wherein said cut sheet includes an upper sheet material (8) that forms a first side of the cut sheet and a lower sheet material (9) that forms a second side of the cut sheet opposite to said first side,~~

~~wherein said IC-tag tape is successively attached to said first side or to said second side of said cut sheet, and~~

~~wherein said IC-tag tape is configured to be used as a successive tape for said cut sheet,~~

~~wherein the cut sheet is made of a corrugated board comprising a second linerboard (8), a first linerboard (9) that forms the opposite side of said cut sheet with respect to said~~

~~second linerboard, and a corrugated medium (10) that is positioned between said second linerboard and said first linerboard,~~

~~wherein said IC-tag tape is positioned between said corrugated medium and said second linerboard,~~

~~wherein the interface between said IC-tag tape and said second linerboard forms an unconnected area, and~~

~~wherein said unconnected area has a width that does not reduce the compressive strength of the cut sheet formed from said corrugated board.~~

22-23. (canceled)

24. (currently amended) ~~A cut sheet (100) having an IC-tag tape (30) along its entire length, the cut sheet being formed from a successive sheet material by the steps of:~~

~~selecting a~~

A successive wet paper material having several IC-tag tapes in serially parallel along its entire length, the successive wet paper material formed by the steps of:

forming several wet webs by flowing and dewatering the pulp suspension on a mesh net of a paper machine;

preparing tape reel (1) of an IC-tag tape to which IC tags (20) are attached with such an IC-tag-pitch that each cut sheet includes at least one IC tag;_{7i}

unwinding said IC-tag tape from said tape reel that is held by a reel stand and driving apparatus; and

providing said IC-tag tape in the machine direction to ~~attach said IC-tag tape to a successive sheet material, and~~
~~cutting said successive sheet material into said cut sheets~~
~~with a predetermined length in the machine direction,~~
~~wherein said cut sheet includes a plurality of layers, and~~
~~wherein said IC-tag tape is positioned and attached between~~
~~said plurality of layers using neither bonding material nor~~
~~adhesive material~~ a position between the wet webs running in the
paper machine at a substantially equivalent speed of the wet
paper material attaching said IC-tag tape to said successive
sheet material in an unpredetermined machine direction position;
and

Combining said several wet webs into wet paper to make the
resultant paper product attached to said IC-tag tapes
successively.

wherein said IC-tags are adhered on the tape substrate with
adhesive material.

25. (canceled)

26. (currently amended) ~~The cut sheet of claim 24, wherein said cut sheet (100) is made of~~ (Currently amended) A successive sheet material having a plurality of IC-tag tapes in serially parallel along its entire length, the successive sheet material formed by the steps of:

preparing a tape reel (1) of an IC-tag tape to which IC tags (20) are attached with such an IC-tag-pitch that each cut sheet includes at least one IC tag;

unwinding said IC-tag tape from said tape reel that is held by a reel stand and driving apparatus;

providing said IC-tag tape in the machine direction at a substantially equivalent speed to the running speed to the successive sheet material to attach said IC-tag tape to said successive sheet material continuously unwinding IC-tag tape and attaching said IC-tag tape to said successive sheet material in an undetermined machine direction position with regard to the cutting edge of said sheet material in attaching IC-tag tape located in any machine direction to said successive sheet material; and

calculating by a production control device stored previously calculated relative position among an encoder, an interrogator and a cutter whether IC-tags are positioned in an area of the cut

sheet to be trimmed in the next die-cutting process, using trim data of the box blanks to be formed into boxes, and using encoder signals at the upstream of the cutter indicating the length of said successive sheet material and detecting means signals indicating location of the IC-tags on the tape attached to said successive sheet material;

wherein said successive sheet material is a plastic corrugated board being formed of a plurality of layers, and

wherein said IC tag tape is attached to said cut sheet by putting said IC tag tape put on a hot-melted part of said plastic corrugated board.

27-28. (canceled)

29. (previously presented) ~~The A cut sheet (100) from a of claim 21,~~

~~wherein said successive sheet material passes below an encoder (97) before the successive sheet material is cut into said cut sheets,~~

~~wherein said encoder (97) sends signals to a production control device (95), the signals indicating the length of said successive sheet material that has passed below the encoder,~~

~~wherein a detecting means (96) sends location signals to said production control device, the signals indicating the~~

~~location of said IC tag that is attached to said successive sheet material;~~

~~wherein said production control device (95) calculates whether said IC tags (20) are positioned in an area to be trimmed during said die-cutting process using said signals from said encoder (97) and from said detecting means (96)~~

cur by pulling IC-tag tapes being attached to said successive sheet material in serially parallel along its entire length, the cut sheet formed by the steps of:

preparing tape reels (1) of an IC-tag tape to which IC tags (20) are attached with such an IC-tag-pitch that each cut sheet includes at least one IC tag;

unwinding said IC-tag tape from said tape reel that is held by a reel stand and driving apparatus;

providing said IC-tag tape in the machine direction at a substantially equivalent speed to the running speed to the successive sheet material to attach said IC-tag tape to said successive sheet material continuously unwinding IC-tag tape and attaching said IC-tag tape to said successive sheet material in an undetermined machine direction with regard to the cutting edge of said successive sheet material in attaching IC-tag tape located in any machine direction position to said successive sheet material;

calculating by a production control device storing
previously calculated relative position among an encoder, an
interrogator and a cutter whether IC-tags are positioned in an
area of the cut sheet to be trimmed in the next die-cutting
process, using trim data of the box blanks to be formed into
boxes, and using encoder signals at the upstream of the cutter
indicating the length of said successive sheet material and
detecting means signals indicating location of the IC-tags on the
tape attached to said successive sheet material;

cutting said successive sheet material into said cut sheets
with a predetermined length in the machine direction; and

rejecting defective sheets that IC-tag position is
determined to be positioned in a trimmed area and defective
sheets with no IC-tag signal by an interrogator detection at the
upstream of an auto stacker before die cutting process by a
diverter.

30-32. (canceled)

33. (currently amended) ~~The cut sheet of claim 21,~~ A wraparound
case made of a cut sheet of claim 29,

wherein said wraparound case is opened and display,

wherein said IC-tag tape works as a cut tape consisting of a film that is 30 to 60 micrometers in thickness, and wherein said IC-tag tape is 2 to 10 mm in width.

34-35. (canceled)

36. (new) A successive sheet material having several IC-tag tapes (30) in serially parallel along its entire length, said successive sheet material formed by the steps of:

 preparing a tape reel (1) of an IC-tag tape to which IC-tags (20) are attached with such an IC-tag-pitch that each cut sheet includes at least one IC tag;

 unwinding said IC-tag tape from said tape reel that is held by a reel stand and driving apparatus; and

 providing said IC-tag tape in the machine direction at a substantially equivalent speed to the running speed to the successive sheet material to attach said IC-tag tape to said successive sheet material continuously unwinding IC-tag tape and attaching said IC-tag tape to said successive sheet material in an undetermined machine direction with regard to the cutting edge of said successive sheet material in attaching IC-tag tape located in any machine direction position to said successive sheet material; and

calculating by a production control device stored previously calculated relative position among the encoder, the interrogator and the cutter whether IC-tags are positioned in an area of the cut sheet to be trimmed in the next die-cutting process, using trim data of the box blanks to be formed into boxes, and using encoder signals at the upstream of the cutter indicating the length of said successive sheet material and detecting means signals indicating location of the IC-tags on the tape attached to said successive sheet material;

wherein said IC-tag tapes are attached with an IC-tag pitch according to cut length of cut sheets to be formed in manufactured cases,

wherein said successive sheet material can be cut by pulling IC-tag tapes that can be strong as common cut tapes,

wherein said IC-tag tapes are configured and embedded around the surface of cases to be used to open and display.

37. (new) The successive sheet material of claim 36,

wherein IC-tags are attached on the tape substrate with adhesive material and not adhered on the successive sheet material.

38. (new) A successive sheet material that can be cut by pulling IC-tag tapes attached to said successive sheet material in parallel along its entire length,

 preparing a tape reel (1) of an IC-tag tape to which IC-tags(20) are attached with such an IC-tag-pitch that each cut sheet includes at least one IC tag;

 unwinding said IC-tag tape from said tape reel that is held by a reel stand and driving apparatus;

 providing said IC-tag tape in the machine direction at a substantially equivalent speed to the running speed to the successive sheet material to attach said IC-tag tape to said successive sheet material continuously unwinding IC-tag tape and attaching said IC-tag tape to said successive sheet material in an undetermined machine direction position with regard to the cutting edge of said successive sheet material in attaching IC-tag tape located in any machine direction position to said successive sheet material; and

 calculating by a production control device storing previously calculated relative position among the encoder, the interrogator, and the cutter whether IC-tags are positioned in an area of the cut sheet to be trimmed in the next die-cutting process, using trim data of the box blanks to be formed into boxes, and using encoder signals at the upstream of the cutter indicating the length of said successive sheet material and

detecting means signals indicating location of the IC-tags on the tape attached to said successive sheet material;

wherein IC-tag attached on the tape substrate with adhesive material and not adhered on the successive sheet material;

wherein said IC-tag tapes are attached with an IC-tag pitch according to cut length of cut sheets by a cutter;

wherein said tape substrate is strong to use as cut tapes;

wherein said successive sheet material is inspected in the production line by a production control device before the successive sheet material is cut into cut sheets.

39. (new) A die-cut sheet cut by pulling IC-tag tape attached to said die-cut sheet from a successive sheet material of claim 38,

wherein said IC-tag tapes are 2 to 10 mm in width;

wherein said IC-tag tapes are successively attached to said successive sheet material during the printing process or the stretching process;

wherein said IC-tag tape is cut into pieces on a folding carton including multi-pack, made of single layered sheet material;

wherein said folding carton is inspected by the interrogator device in the production line that detects whether IC-tag is damaged by the die-cutter during the die-cutting process;

wherein said folding carton blank is die-cut after printing continuously; and

wherein said the folding carton blank damaged by the die-cutter is rejected under the detection by an interrogator in the production line with no detection signal.

40. (new) A paper book cover wrapping around a book and having IC-tag tapes along a length of said paper book cover, said paper book cover is formed by the step of:

preparing tape reels of the IC-tag tape according to cut length of said paper book cover, wherein said IC-tag tape is positioned between the layers of the paper material or positioned on the surface of the paper material;

unwinding said IC-tag tape from said tape reel that is held by a reel stand,

providing said IC-tag tape in the machine direction at a substantially equivalent speed to the running speed to the successive sheet material to attach a IC-tag tape to said successive sheet material without rewinding the tape substrate and without predetermining the machine direction position of IC-tag with regard to the cutting edge of said successive sheet material in attaching IC-tag tape located in any machine direction to said successive sheet material;

calculating by a production control device stored previously calculated relative position among the encoder, the interrogator and the cutter whether IC-tags are positioned in an area of the cut sheet to be trimmed in the next die-cutting process, using trim data of the box blank to be formed in boxes, and using encoder signals at the upstream of the cutter indicating the length of said successive sheet material and detecting means signals indicating location of the IC-tags on the tape attached to said successive sheet material;

cutting said successive sheet material into said paper book cover with a predetermined length in the machine direction; and

rejecting defective sheets that IC-tag position is damaged and defective sheets with no IC-tag signal by an interrogator detection at the upstream of an auto stacker;

wherein said paper book cover is die-cut from successive sheet material having IC-tag tapes in parallel;

wherein said IC-tag tape can be torn off the book cover;

wherein said paper book cover has said IC-tag tape attached with such an IC-tag pitch that each paper book cover includes at least one IC-tag.